

WHAT IS CLAIMED IS:

1. A method for sealing a flexible tube containing a fluid, comprising:
  - driving opposed jaws disposed about said tube toward each other;
  - as said jaws deform said tube, controlling speed and rate of speed of said jaws in order to reduce turbulence of the fluid and vibration of the tube;
  - driving said jaws into abutment, with said tube interposed therebetween, and applying a sealing pressure for a dwell time; and
  - thereafter retracting said jaws.
2. The method of claim 1 wherein said controlling comprises decelerating said jaws prior to said driving said jaws into abutment.
3. The method of claim 1 wherein said controlling comprises decelerating said jaws to a stopped position whereat said jaws are spaced apart and maintaining said stopped position for a pre-determined time prior to said driving said jaws into abutment.
4. The method of claim 1 wherein said jaws are driven by a motor, said motor stalling when said jaws are driven into abutment, said applying a sealing pressure comprising torquing said motor, while stalled.
5. The method of claim 1 wherein said opposed sealing jaws comprise a first jaw with a heated ribbon and a second jaw acting as a backstop for said first jaw.
6. The method of claim 1 wherein said control comprises decelerating said jaws over a time window during which said jaws are expected to impact said tube.
7. A device for sealing a tube containing a fluid, comprising:
  - a pair of opposed sealing jaws disposed about said tube;
  - a motor for driving each one of said sealing jaws toward the other;
  - an indicator for indicating position of said jaws; and
  - a controller input by said indicator and outputting to said motor for controlling a motion profile of said sealing jaws.

8. The device of claim 7 wherein said controller is for controlling a motion profile of said sealing jaws such that said jaws are initially driven toward each other at up to a first speed, said jaws are thereafter decelerated and advanced until said motor stalls.

9. The device of claim 8 wherein said controller is for controlling said motion profile such that said jaws are decelerated to a stopped position for a pre-determined time prior to being advanced until said motor stalls.

10. The device of claim 8 wherein said controller is also for controlling a torque of said motor after said motor has stalled so as to apply a sealing pressure to said tube for a dwell time.

11. The device of claim 8 wherein said opposed sealing jaws comprise a first jaw with a heated ribbon and a second jaw acting as a backstop for said first jaw.

12. The device of claim 7 further comprising:

- a driving element connected to said motor for linear movement; and
- a first jaw of said sealing jaws connected to said driving element so as to move with said driving element.

13. The device of claim 12 wherein said motor is a rotary motor and further comprising a threaded shaft coupled to an output of said motor, said driving element being threaded to said shaft.

14. The device of claim 13 wherein said indicator is a rotary encoder associated with said motor.

15. The device of claim 7 further comprising:

- a driving element connected to said motor for linear movement;
- a first jaw of said sealing jaws connected to said driving element so as to move with said driving element;
- a rack extending from said driving element;

a pinion meshing with said rack;

a rack extending from a second jaw of said sealing jaws, said rack extending from said second jaw meshing with said pinion so that said second jaw moves in an opposite direction to a direction of movement of said driving element.

16. The device of claim 15 wherein said motor is a rotary motor and further comprising a threaded shaft coupled to an output of said motor, said driving element being threaded to said shaft.

17. The device of claim 16 wherein said indicator is a rotary encoder associated with said motor.